

REMARKS

The Examiner is thanked for the thorough examination of the present application. The Office Action, however, tentatively rejected all claims. In this response, claims 6-8, 17-19 and 28-30 have been cancelled, and claims 1-2, 4-5, 9-13, 15-16, 20-24, 26-27 and 31-33 have been amended. In the revised claims 1-2, 4-5, 12-13, 15-16, 23-24 and 26-27, the phrase "resource types" has been replaced with "process jobs, control jobs or internal buffer sections" in order to overcome the rejections under both 35 U.S.C. 112 and 35 U.S.C. 103(a). The amended claims 9, 20 and 31 further incorporate constraints of acquisition of control jobs, which is clearly supported by the originally-filed specification (see e.g., page 9). Amended claims 10, 21, and 32 further incorporate constraints of acquisition of process jobs, which are also supported by the original specification (again, refer to page 9). Amended claims 11, 22 and 33 further incorporate constraints of acquisition of internal buffer sections (again, refer to page 9). Accordingly, no new matter has been added to the application by this amendment.

In short, Applicant submits that all rejections have been accommodated and/or rendered moot by the amendments made herein. Accordingly, based solely on the amendments made herein, all rejections should be reconsidered and withdrawn.

In addition, and to assist the Examiner, Applicant attaches two exhibits to this response. The first exhibit is the publication entitled *SEMI E94-1101 PROVISIONAL SPECIFICATION FOR CONTROL JOB MANAGEMENT*, which was published in July 2001. As disclosed therein (and therefore understood by persons skilled in the art), the term "control job space" indicates memory space allocated for control jobs, as shown in Figure 1 of page 5, utilized to define a unit of work on equipment for one or more process jobs to be applied to the material contained in the carriers, as shown in the terminology of page 1. Thus, Applicant respectfully submits that the

term “control job space” would be understood by, and enabled to, those skilled in the art.

Likewise, Applicant also attach a publication entitled *SEMI E40-1101 STANDARD FOR PROCESSING MANAGEMENT*, which was published in July 2001. In this publication, the original claimed term of “process job space” indicates memory space allocated for process jobs, as shown in Table 2 of page 14, being a material processing job for a processing resource specifying and tracking the processing to be applied to the material, as shown in the terminology of page 2. Thus, Applicant submits that the term “process job space” would be understood by, and enabled to, those skilled in the art.

In the way of further, superfluous comments, claims 1-33 were rejected. After cancellation of certain claims herein, claims 1-5, 9-16, 20-27 and 31-33 remain pending in this application. Applicant submits that all pending claims are clearly in condition for allowance. Applicant presents the remarks below in an effort to further point out the distinctions to the Examiner at this time. The accompanying remarks are believed to be helpful, in light of the positions taken in the Office Action. The remarks of the instant response further clarify and distinguish Applicant’s claimed embodiments over Examiner’s grounds of rejection and supporting reasoning presented in the Office Action.

Specifically, the Office Action rejected all claims under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent 6,748,282 to Lin (referred to as “Lin” hereinafter). Applicant respectfully traverses these rejections for at least the following reasons.

The Office Action alleged that Lin discloses system, software, and method for carrier traffic management per claimed invention. ... Upon detecting a load port of the fabrication tool

is available, the host computer is allegedly configured to acquire an obvious available number of resource type for the fabrication tool 18 (referring to Figure 2, steps 92/94), identification of a carrier and the required number of resource type corresponding to the carrier is then acquired (referring to Figure 3, step 102, and Figure 4). If the available number of resource type equals to the required number of resource type, transfer command is issued (Figure 3, step 146)" Office Action, pg. 3. Lin discloses an operation management interface (Figure 2), a process step for checking equipment processing status, a process step for determining whether equipment ready to receive FOUP (steps 92/94), a process step for collecting FOUP status information (step 102).

However, independent claims 1, 12, and 23 (as amended) recite (respectively):

1. A system of carrier transport traffic management, comprising:
a fabrication tool;
a host computer, connected to the fabrication tool, *configured to acquire an available number of control jobs, process jobs or internal buffer sections for the fabrication tool upon detecting a loadport of the fabrication tool is available;*
and

a material transport system, connected to the host computer, configured to receive the available number of the control jobs, process jobs or internal buffer sections corresponding to the fabrication tool, acquire a carrier identity corresponding to a carrier, acquire a required number of the control jobs, process jobs or internal buffer sections corresponding to the carrier, *and issue a load command to an automated material handling system (AMHS) to transport the carrier to the fabrication tool if the available number of the control jobs, process jobs or internal buffer sections exceeds or equals to the required number of the control jobs, process jobs or internal buffer sections.*

12. A method of carrier transport traffic management, the method comprising using a computer to perform the steps of:

receiving an available number of control jobs, process jobs or internal buffer sections corresponding to a fabrication tool from a host computer;

acquiring a carrier identity corresponding to a carrier;

acquiring a required number of the control jobs, process jobs or internal buffer sections corresponding to the carrier identity; and

issuing a load command to an automated material handling system (AMHS) to transport the carrier to the fabrication tool if the available number of the control jobs, process jobs or internal buffer sections exceeds or equals to the required number of the control jobs, process jobs or internal buffer sections.

23. A machine-readable storage medium for storing a computer program which when executed performs a method of carrier transport traffic management, the method comprising the steps of:

receiving an available number of control jobs, process jobs or internal buffer sections corresponding to a fabrication tool from a host computer;

acquiring a carrier identity corresponding to a carrier;

acquiring a required number of the control jobs, process jobs or internal buffer sections corresponding to the carrier identity; and

issuing a load command to an automated material handling system (AMHS) to transport the carrier to the fabrication tool if the available number of the control jobs, process jobs or internal buffer sections exceeds or equals to the required number of the control jobs, process jobs or internal buffer sections.

In contrast, Lin wholly fails to teach or disclose the receiving of an available number of control jobs, process jobs or internal buffer sections and means, a required number of the control jobs, process jobs or internal buffer sections, means for receiving the available number of control jobs, process jobs or internal buffer sections, or means for acquiring the required number of control jobs, process jobs or internal buffer sections. For at least this reason, the rejections should be withdrawn.

In addition, Lin teaches various verification process steps in the method of Fig. 4 (Col. 8: 5-63). However, as embodied in amended claims 1, 12, and 23, Lin teaches nothing about such resource comparison means for verifying whether available number of the control jobs, process jobs or internal buffer sections exceeds or equals to required number of the control jobs, process jobs or internal buffer sections. For at least this additional reason, the rejections should be withdrawn.

For at least the foregoing reasons, independent claims 1, 12 and 23 patently define over the cited art of record. Insofar as all remaining claims depend from claims 1, 12, or 23, all pending claims are also in condition for allowance.

Cited Art of Record

The cited art of record has been considered, but is not believed to affect the patentability of the presently pending claims.

CONCLUSION

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the pending claims are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

No fee is believed to be due in connection with this Amendment and Response. If, however, any fee is believed to be due, you are hereby authorized to charge any such fee to deposit account No. 20-0778.

Respectfully submitted,

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